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ABSTRACT

A qualitative case study design was used to identify effective staff development practices in schools where there had been an increase in scores on the state-mandated tests over a period of 2 years. Informal interviews were conducted with 10 Algebra I teachers at 2 high schools, 4 eighth-grade mathematics teachers at 2 middle schools, 7 English teachers at 2 elementary schools, and 4 principals. Results indicate that some practices, identified by teachers and principals as having contributed to higher test scores, were the same across the three school levels. The most important factor, according to those interviewed, was the commitment and dedication of all teachers and administrators to do whatever was needed to improve student learning. Some decision-level of staff development was identified as being helpful, but decentralized or building-level training was found to be just as effective, or more so, because it was directly related to the needs of teachers. Also effective was a strong, clear, in-depth focus on specific areas with a common theme. Test scores, teacher input, small group collaboration, and a culture of support and success were also important contributors to improved achievement. (SLD)

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Staff Development Practices in Schools Demonstrating Significant Improvement on High-Stakes Tests

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The Standards of Learning (SOL) Training Initiative Evaluation was a project designed to evaluate the efficacy of the training teachers receive in Virginia's SOL, and to attempt to link staff development with student achievement. The purpose of this investigation, which was one component of the SOL Training Initiative Evaluation, was to conduct case studies to identify effective staff development practices in two elementary, two middle, and two high schools where there was an improvement in scores on the Virginia Standards of Learning tests from spring 1999 to spring 2000.

Staff development is an integral part of the education profession. However, over the years, the nature of inservice training provided to teachers has changed to coincide with changes in the knowledge base and structural and cultural changes in education. Although staff development has been an essential component of ongoing training for teachers, it has not always been viewed as a positive experience for participants. Much of what was offered was considered to be irrelevant and ineffective (Wood and Thompson, 1980). This began to change in the late 1970s when research in staff development began to focus on identifying the characteristics of effective staff development practices. Researchers analyzed innovative projects and tried to determine why some succeeded and others failed (Mazzarella, 1980). This led to the publication of numerous articles on 'best practices' and guidelines for developing new models of staff development that incorporated such practices (Hutson, 1981; Wood and Thompson, 1980; Korinek, Schmid, & McAdams, 1985). There was also the belief that more was better so teachers were required to spend additional days participating in staff development sessions. Over the years the nature of staff development has changed and teacher participation hours have increased but there have been very few studies exploring the link between staff development, teacher behavior and student achievement. According to Guskey (1997), much of the research investigating the impact of this training has not been very successful. However, with the current emphasis on accountability staff developers are being pressured to show that inservice training is changing teacher behavior and, ultimately, enhancing student achievement.

Method

A qualitative case study design was used to identify effective staff development practices in schools where there had been an increase in scores on the state mandated tests over a period of two years. Two interviewers conducted informal interviews with Algebra I teachers at the two high schools, Grade 8 math teachers at the two middle schools, and English teachers at the two elementary schools. The interviews were not recorded but both interviewers took extensive notes. At one high school, the Algebra I teachers were interviewed individually. Focus group interviews were held in all the other

schools. The principals at each school were also interviewed either before or after the interview with the teachers. Principals were not present during the teacher interviews.

The interviews with both the teachers and principals began with a general question about why they thought the scores increased from one year to the next. For example, opening questions included: What accounted for the higher pass rate from 1999 to 2000? What do you think contributed to the increase in scores from 1999 to 2000? How do you explain the increase in your Algebra I scores from 1999-2000? Once teachers had responded to this general question, the interviewers asked them follow-up questions related to the staff development events they had participated in. More specifically, interviewees were asked to identify effective practices that they felt had contributed to the improvement in their students' scores. The principals were asked follow-up questions about their role in providing staff development for their teachers and the characteristics of these events that they felt had had an impact on student achievement. Both principals and teachers were also asked to identify other factors that may have contributed to the increase in scores. All participants were assured that their responses would be confidential.

Data Source

A purposeful sampling procedure was used to identify high, middle, and elementary schools that showed gains in test scores from spring 1999 to spring 2000 in Algebra I, grade 8 mathematics, and grade 3 and grade 5 English, respectively. Before selecting our final sample, we eliminated from our database schools that did not meet a number of additional criteria. For example, we eliminated schools where the increased scores could be attributed to cohort effect. Also, we only wanted to include those schools where principals had indicated in a survey, which was part of the overall training initiative evaluation, that staff development during 1999-00 had focused on the areas selected and where staff turnover had been less than 75% over the last two years. From our initial sample of 10 schools at each level that had shown the most gain, we selected two high schools, two middle schools and two elementary schools. We interviewed a total of 10 high school Algebra I teachers, four grade 8 math teachers, seven elementary English teachers and the principals at each these schools.

Results

The results indicated that some practices, identified by teachers and principals as having contributed to higher test scores, were the same across the three school levels. Clearly, the most important factor contributing to gains in test scores, according to those interviewed, was a commitment and dedication of all teachers and administrators to do whatever was needed, together, to improve student learning. A strong teacher expectation was evident at the three levels; all teachers

communicated to students that performing well on the SOL test was a priority and very serious business. This attitude was evidenced in much more collaboration and sharing among teachers (both within the same grade and across grades), with staff development activities that enabled mutual planning of common goals, curriculum, instructional strategies, and evaluation strategies. In some schools, several teachers used the same classroom assessments. This collaborative planning and evaluation was ongoing throughout the year. Staff development time was provided for groups of teachers to accomplish grade level and subject objectives. In most schools, a pacing and/or curriculum guide (scope and sequence) was developed and implemented. Administrative support was an important component of effective staff development; at the high school level, there was evidence for decentralization and department chairs taking on the responsibility of identifying staff development needs and taking steps to ensure these needs were met.

Teachers and principals identified the following characteristics of effective staff development practices:

1. Some division-level staff development was identified as being helpful but decentralized or building-level training was found to be just as effective if not more so because it was directly related to the needs of the teachers.
    - *Decentralization of staff development. Building level staff development found to be effective. Departments conducted their own training.(high)*
    - *Building-level staff development effective because it was focused on Grade 8 math. (middle)*
    - *In-house staff development was more important (middle)*
    - *Building-level training was effective - could be geared to specific needs of the school. (elementary)*
2. There was a strong, clear, in-depth focus on specific areas with a common theme.
    - *Staff development was much more focused in 1999-00. The first area of focus was Algebra. (high)*
    - *In one school, training provided by Instructional Support Team from the Central Office. The team came out every 4-6 weeks to the schools and provided instructional packets. Team also shared information about effective practices in other schools. The training was SOL specific, and hands on. The team demonstrated strategies that could be used with borderline students. (middle)*

- *During summer inservice, teachers focused on what was needed in their own school. This was successful. It was coordinated by the principal and all teachers were involved.*

3. Test scores were analyzed and the data were used to determine staff development needs.
    - *The SOL scores were used to determine staff development needs. (high)*
    - *Emphasis was on the analysis of test data to identify strengths and weaknesses.(elementary)*
    - *In-house staff development was based on analysis of scores (elementary)*
4. Teacher input was solicited to determine the nature of staff development. The most effective presenters were other teachers.
    - *The needs are determined by department chair. (high)*
    - *Teachers came in with specific idea, identified problems with instruction, classroom management etc. This changed as a result of staff development; changes in what and how they teach. (middle)*
    - *Building-level staff development needs identified by the teachers.(elementary)*
    - *Inservice conducted by teachers themselves. Outside consultants invited on an as needs basis.(elementary)*
5. There was strong emphasis on building effective small group collaboration.
    - *Informal follow-up – Teachers discussed among themselves what was working and what was not working; some peer observations; teachers got together to develop activities and assessments; held informal meetings to discuss ideas and problems; placed big emphasis on communication and collaboration. (high)*
    - *Teachers discussed among themselves what was working and what was not working; teachers got together to develop activities and assessments; held informal meetings to discuss ideas and problems; there was big emphasis on communication and collaboration among teachers. (middle)*
    - *Communication and collaboration among teachers.(elementary)*
    - *Team work among teachers is a strength. (elementary)*
6. A culture of support and success was established.
    - *The school culture advocated student success. (high)*
    - *The principal was the cheer leader. (middle)*

- *Teachers had a positive attitude (elementary)*
- *Positive attitude was instilled in students. (elementary)*

In addition to staff development practices, teachers and principals also identified other factors that they felt contributed to the gains in test scores. These were broadly categorized as instructional and structural factors. Some instructional factors that were common across the three school levels included enhancing students' test-taking strategies, providing additional instruction to less capable students before or after school, taking advantage of resources designed specifically for preparing students for the SOL tests, using test data to guide instruction, and increasing the use of visual aids to help students understand math concepts . Structural changes at the high and middle schools included extending instructional time from 45 to 90 minutes in Algebra I and grade 8 mathematics, respectively, so students had math every day for a longer period of time, reassigning teachers so honors teachers were teaching the lower ability students, reducing class size, and, in one school, tracking students by ability.

Discussion

These case studies, albeit limited to six schools and three subject areas, showed that in schools where there had been significant gains in test scores effective staff development practices included some that have already been identified by previous research. For example, there was strong administrative support for staff development; there was greater emphasis on conducting staff development at the building level; the training events were based on the needs of the teachers; teachers rather than administrators or consultants were providing the training; and analyses of students' test scores were being used to guide staff development.

There was also evidence of a new direction in staff development that may be attributed to high stakes testing particularly where school accreditation is tied to student performance on state mandated tests. A high-stakes testing environment places a lot of pressure on both administrators and teachers to do whatever is necessary to ensure that all students are prepared for the tests and the school achieves the criterion pass rate set by the state. Comments from the teachers at each of the schools indicated that team effort, collaboration, sharing ideas, and resolving problems together were key factors in their school's success. Teachers were developing their own skills during informal staff development sessions, for example, during team meetings, over lunch, after school, and even between class periods. In essence, informal staff development was occurring on a regular basis at the schools as the need arose. While some teachers did attend more formal staff development sessions at the district, state, or national levels, they indicated that activities conducted at the building level were more valuable because they

were more relevant and practical. Also, they could participate in these sessions without having to leave their classrooms to substitute teachers.

These findings support those of Newmann and Associates (1996). In a study of 24 "restructuring schools" they found that in more successful schools:

> Professional development tended to be focused on groups of teachers within the school of the faculty as a whole. Making use of internal as well as external expertise, staff development activities took advantage of local skills and sharing of effective practice. Including internal experts as staff developers reinforced teachers' sense of commitment to their school's goals.

Recently, Garet, Porter, Desimone, Birman, and Yoon (2001) used data from a Teacher Activity Survey conducted as part of the national evaluation of the Eisenhower Professional Development Program to examine the relationship between features of professional development that have been identified in the literature and self-reported change in teachers' knowledge and skills and classroom teaching practices. They found that two structural features of professional development activities that had positive outcomes for teachers were collective participation and duration. These findings were consistent with the results in our study. When professional development is arranged for groups of teachers from the same school or grade level, teachers have more opportunities to discuss concepts, skills and problems, share resources, and discuss students' needs across classes and grade levels. This is collective participation. Also, unlike 3-hour one time workshops these activities are sustained over time so they provide opportunities for in-depth discussion of content, student understanding of the content, and strategies for teaching the content. Further, activities that span a longer time period allow teachers more opportunities to try out their new skills and to get feedback on their teaching. Teachers in our sample found the building level professional development activities to be more effective because the teachers at a particular grade level participated as a group and the activities were extended over a period of time.

Besides what appeared to be a team-effort approach to staff development, schools were also using other methods to enhance student learning. They were making structural changes so students received instruction in mathematics and English on a daily basis for a longer period of time. Teachers developed curriculum guides so the curriculum was aligned with the SOL; they developed pacing charts to ensure that everything was covered before the tests; they were using additional resources that had been designed specifically to help teachers prepare students for the SOL tests; and they placed a lot of emphasis on test-taking skills throughout the year so students were familiar with the formats of the state

tests. In all six schools, teachers were very positive about what they were doing and they conveyed this attitude to the students by encouraging them and constantly reminding them that 'they could do it'. Rather than relying solely on staff development, the six schools that participated in the case studies used a more holistic approach to ensure student success on the SOL tests.

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